《論　文》

ENGLISH ADVERBIALS AND STRUCTURE-PRESERVING HYPOTHESIS

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o. Aim

This paper aims at examining Emonds' analysis of some English adverbials and trying to propose a way of describing them.

In my article (1979) we discussed the validity of "transportability convention" proposed in Keyser (1968) and pointed out that the fundamental idea was adequate though much modification in the PS rules and the expansion of its coverage were needed. In that paper we had no space to discuss Emonds' hypothesis.

In this paper we are going to argue that the movement of adverbials can be described in terms of *dislocation* and *designations of transportability*, both of which presuppose refined PS rules and rigorous hierarchical representations. Dislocation is concerned with the movement of adverbials which violates cooccurrence restrictions in an underlying structure and the designation of transportability is concerned with what maintains them.

1. Structure-Preserving Hypothesis

Movement transformations are supposed to move constituents but every constituent cannot be moved out of and/or into a certain structure even if the structural description is met with reference to a particular transformation. There are a number of transformations proposed already but some of them share some constraints. It suggests that various transformations can be grouped into a rather small number of rules which are controlled by more general constraints. From this point of view Emonds has proposed "Structure-Preserving Hypothesis" and tried to restrict the number of "possible transformations". No doubt his focus is on the imposition of general constraints on rules, and the description of adverbials is not a main theme for him. In this article, however, we are going to focus our attention on his treatment of adverbial movement. English adverbials seem to be the best object for an inquiry about the movement constraints of constituents because they show much more freedom and variety in movement than any other grammatical category.

1.1. Definitions

According to Emonds, transformations consist of major and minor ones, and the former consists of root and structure preserving rules. The definition of root transformation is given in (1):

(1) A transformation (or a transformational operation, in the case of a transformation performing several operations) that moves, copies, or inserts a node C into a position in which C is immediately dominated by a root S in derived structure is a "root transformation" (or a root transformational operation). (Emonds 76: 3)

The key term of this definition is "root S", the definitions of which are (2) and (3):

(2) . . . a root S will mean either the highest S in a tree, an S immediately dominated by the highest S, or the reported S in direct discourse. (Emonds 70: 6)

(3) A root S is an S that is not dominated by a node other than S. (Emonds 76: 2)

In the definition (2) the qualified structures are listed up, but in (3) a more comprehensive and general definition is given. Therefore, we will refer to (3) instead of (2) if necessary.

Structure-preserving rules are defined in (4) and (5):

(4) A structure preserving movement rule is a transformation such that (i) the structural description specifies the location in trees of two nodes B_1 and B_2 bearing the same label X, and (ii) the structural change moves B_2 and all the material dominated by it into the position of B_1 deleting B_1. (Emonds 70: 28)

(5) A transformation (or a transformational operation, in the case of a transformation performing several operations) that introduces or substitutes a constituent C into a position in a phrase marker held by a node C is called "structure-preserving". (Emonds 76: 3)

In a word, structure-preserving rules move a constituent C together with subconstituents dominated by it, into a position where a node C is independently motivated by PS rules.

Minor rules, which are recently called local transformations, are defined as in (6) and (7):

(6) A minor movement rule is a transformation which moves a specified constituent B over a

single adjacent constituent C. (Emonds 70: 158)

(7) A transformation or a transformational operation that affects only an input sequence of a single nonphrase node C and of one adjacent constituent C' that is specified without a variable, such that the operation is not subject to any condition exterior to C and C', is called a "local transformation". (Emonds 76: 4)

1.2. Adverbial Movement Rules in Emonds (70) and (76)

(8)(i) directional adverb preposing

(ii) negated constituent preposing

(iii) locative PP substitution

(iv) factive adverb preposing

(9) manner adverbial movement

(10) particle movement

Only the movement rules including adverbials are listed here. The examples of (8) are those of root transformations, (9) is that of structure preserving ones, and (10) is that of local ones. In this paper (8) except (8ii) and (9) will be under examination.

1.3. PS rules

It depends on the configuration of PS rules whether a given movement rule belongs to a root, structure-preserving or local transformation. We list his PS rules which contain what we usually call adverbials:

(11) (i) $S \rightarrow COMP \ldots NP .(AP).(M).\left\{\begin{matrix} AF \\ TNS \end{matrix}\right\}.(NEG).(EMP).VP$

(ii) $S \rightarrow S \ldots PP$

(iii) $VP \rightarrow \begin{pmatrix} AP \\ -pred \end{pmatrix} \ldots V \ldots \left(\left\{\begin{matrix} NP \\ +pred \end{matrix}\right\}.(PP)^* \ldots (S)\right)$

(iv) $VP \rightarrow VP \ldots PP$

(Emonds 70 & 76)

2. Discussion

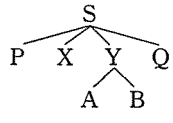
We are now going to discuss Emonds' hypothesis with reference to English adverbials.

2.1. First, we must point out that whether a given transformation is a root one or not depends

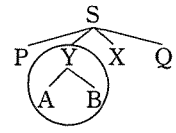
on where the moved constituent stands in the derived structure. When the constituent is "moved" or "copied" it is supposed to have been in the structure before the transformation is applied, and, when it is "inserted", it is supposed to have been somewhere else. But there is no factor in the previous structure that decides whether a given transformation is a root one or not. In other words, until we have a look at the moved constituent in the surface structure we cannot say whether it is a root one or not. This means that his root transformation, which is considered to appear only in the post-cyclic level, is, by nature, different from what we usually call "a transformation".

2.2. As for root transformations, we can distinguish two kinds of them. Suppose that the structure (12a) is underlying and that (12b) and (12c) are derived ones with the moved constituents marked with circles:

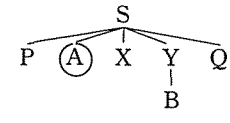
(12)(a)



(b)



(c)



The transformations which derive (12b) and (12c) out of (12a) are, by definition, root ones because the circled constituents are immediately dominated by an S. But attention must be led to a difference in status of the moved constituents in (12b) and (12c). In the derivation of (12b), the relation between S and $[_{Y}$ AB] remains unchanged, which means there is no violation in cooccurrence restrinction between them. On the other hand, in the derivation of (12c), A's relation to other constituents, especially to the S, is altered by the rule, which indicates that cooccurrence relation around A has changed. Based on these observations, we assume that the root transformation should be subclassified into two: one is that which maintains cooccurrence restriction in an underlying structure and the other is that which violates it.

2.3. When a constituent is moved to the sentence-initial position immediately dominated by an S, its position is specified by a node COMP. With regards to this node attention must be paid to the following points: (i) The COMP seems to be a "topic position", a position to which all preposed constituents are moved, but its status itself is still open to question. (ii) When a constituent is moved to the sentence-initial position, the position to be moved to is specified by a COMP, but when moved to other positions there is no specific node given even if the moved constituent is immediately dominated by an S. This suggests that a movement into a COMP is something like a structure preserving one rather than a root one. (iii) The node COMP is not filled until a constituent is moved to and, therefore, we are forced to have it empty all through

the process of semantic interpretaion, though this point has already been mentioned by several scholars. (iv) A COMP occurs only once in an S, which explains automatically that a preposing transformation may not be applied more than once. But empirical investigation shows that this kind of restriction is too rigorous to describe actual utterances, which will be illustrated later. Clearly much research must be done with respect to the points discussed above, but, for the time being, we have no better alternative and we assume that there is a COMP in the sentence-initial position.

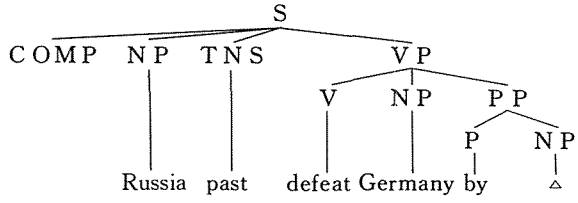
2.4. Adverbials, which Emonds has not given any independent node to, are supposed to be covered by AP and/or PP. However, it seems impossible to describe all adverbials by only these nodes. The AP is an adjectival phrase whose head is an adjective but it is arbitrary to conclude that all the adverbials should, though those represented by PP are excluded, be derived from adjectives. Furthermore, the rule (lli) suggests that adverbials to be moved by a root transformation appear in such positions as NP . . . (AP), (AP) . . . (M), (NEG) . . . (EMP)and so on as well as the position specified by a COMP, so far as they keep an immediate dominance by an S. But, if we follow this procedure we must face a lot of ungrammatical sequences. Much modification and revision in PS rules are needed.

2.5. Emonds has revised the PS rules by introducing empty nodes, but, at the same time, it has brought about rather serious problems. According to Emonds (70: 30–31), (13a) and (13b) are represented by (14) in the underlying structure level:

(13)(a) Russia defeated Germany.

(b) Germany was defeated by Russia.

(14)



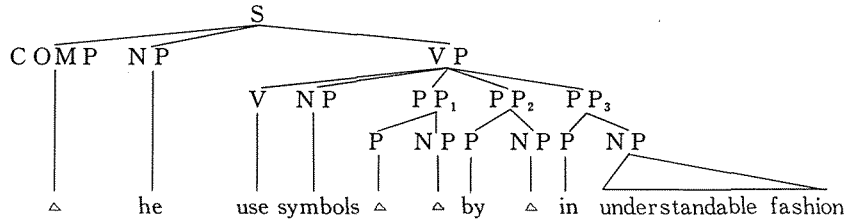
In (14), first, △ is replaced by *Russia*, whose vacancy, which may be labeled △, is then filled with *Germany*, and the place which was once dominated by *Germany* is labeled with △, and finally deleted.

This procedure shows that there are two kinds of empty nodes: one is what can be specified in PS rules and the other is what is produced after transformations. The former can be specified in PS rules and its status is clear but the latter varies according to the rules applied and it is next to impossible to specify all possible empty nodes in PS rules beforehand. Therefore, the

latter case cannot be covered by Emonds' framework.

The example above is rather a favorable one to his model but it might happen that we have (15) instead.

(15)



Empty nodes are limited to the nodes which have been independently derived by PS rules. But either obligatory or optional nodes may be empty, and so (15) is one the possible structures. In the case of passive transformation, is it possible for *he* and *symbols* to find out their proper positions to be moved to? The answer may be very dubious if I do not misunderstand his idea. Furthermore, since PP's can be recursively generated as clear in (Iliii), it might happen that we have indefinitely many PP's theoretically, though, of course, its number may be somehow limited actually. Then, each PP is likely to have more than one position to be moved to, and it might be that a structure consists of indefinitely many empty nodes of many different characteristics. This seems to provide us with a very complicated and unnatural description of adverbials.

2.6. Emonds has introduced a PP with an asterisk in (Iliii), which can be recursively derived in an indefinite number of times. But this device itself is very *ad hoc*, and, if we follow it, we should put an asterisk on PP's in (Ilii) and (Iliv) and S's in (Ilii) and (Iliii), which is clearly redundant. Furthermore, when more adverbials than one including PP's occur in a structure, they usually show some hierarchical restrictions which cannot be described in terms of linear sequence of any constituents. In conclusion, the introduction of PP's with an asterisk does not seem to serve an adequate description of adverbials.

3. Description of Some Adverbials

We are going to pick up a few types of adverbials including those dealt with in Emonds (70) and (76), examine his arguments of structure preserving hypothesis, and finally present our description.

3.1. Directional Adverb Preposing

According to Emonds this transformation, one of the root ones, can generate the sentences (16) and (17). (18) is presented to make clear the characteristics of these sentences.

(16)(a) In came John!

(b) Down the street rolled the baby carriage!

(c) Up trotted the dog!

(d) Round and round spins the fateful wheel!

(e) Here he comes!

(f) Away they ran! (Emonds 70: 12; 76: 29)

(17)(a) In John came!

(b) Down the street the baby carriage rolled!

(c) Round and round the fateful wheel spins!

(d) Into the parking lot the car lurched!

(e) There John goes!

(f)?Up the dog trotted! (Emonds 70: 13)

(18)(a)*In John was coming!

(b)*Down the street the baby carriage was rolled!

(c)*Here he DOES come!

(d)*Round and round the wheel has spun!

(e)*Away they didn't run!(Emonds 70: 13; 76: 30)

A close examination of these sentences (16), (17) and (18) shows the following facts: (i) Subject-Verb inversion is optionally applied when the subject is an NP, and is blocked when it is a pronoun. In his framework, the directional adverb preposing rule entails Subject-Verb inversion and the rule without the inversion is left out of focus. As clear from (16a) to (16d), this rule generates a sentence in which a directional adverb is placed in a sentence-initial marked position and the subject is placed in a sentence-final marked one. (ii) Only simple past and present tenses are available here. Aspectual modification, such as progressive and perfect forms, is prohibited. As a result, the rule is applicable to (19a), but not to (19b), though we cannot find so much difference in status between the two *in*'s themselves.

(19)(a) John came *in*.

(b) John was coming *in*.

(iii) The passive form of a verb does not occur. (iv) Emphatic and negative formatives cannot occur. (v) The directional adverbs, including adverbial particles, in these sentences are considered to have been under a node VP, from their cooccurrence restriction with verbs, before this rule is applied. (vi) The verbs must be such Vi's that cooccur with directional adverbials and are not followed by anything but the constituent to be preposed in the structure

before the rule is applied. (vii) All the sentences cited here have exclamation marks.

Form these observations we can conclude that there are so rigorous restrictions imposed on this rule that it looks like anything but ordinary movement rules, which, generally speaking, have a very small range of restrictions. In other words, he has specified this rule on a rather different basis than other ordinary movement rules. His argument depends exclusively on exclamatory or expressive sentences. This seems to suggest that the rule should be a part of exclamatory rules. There will be no merit in claiming that the rule should be one of the root transformations.

The directional adverb preposing rule is a root one and, naturally, it is not applicable in an embedded S as shown in (20), but we have a rather subtle case as in (21):

(20)(a)*I noticed that in came John.

(b)*It seems that away they ran. (Emonds 76: 30)

(21)(a) Wendy said she opened the window and in flew Peter Pan. (Hooper-Thompson 73: 126)

(b)*Wendy said that she opened the window and that in flew Peter Pan.

(c)*Wendy insisted that she opened the window and in flew Peter Pan.

(d)*Wendy regretted that she opened the window and in flew Peter Pan.

In order to examine the characteristics of (21a), I made up (21b)-(21d) and checked them with native speakers of English. One possible interpretation of (21a) may be (i) that the expression "Wendy said" is of a parenthetical character with no important meaning, as compared witn "Wendy insisted" in (21c) and "Wendy regretted" in (21d), both of which carry important loads of information, and (ii) that *in flew Peter Pan* in (21a) seems not to be regarded as what is embedded in the *that*-clause because (21b) is unacceptable.

Another examples of the directional adverb preposing in an embedded sentence are in (22) and (23):

(22)(a) He was washing the dishes when the dog came in.

(b) He was washing the dishes when in came the dog. (Green 76: 392)

(23) Pay close attention because here comes the first one. (SS800623)①

In (22a), the content of *when*-clause is presupposed and the main clause is asserted. But, in (22b), both clauses are asserted. This means that the whole sentence in the latter case is likely to be open to speaker's feeling. Likewise, in (23), there are two interpretaions: one is that

because-clause is presupposed and the main one is asserted, and the other is that both clauses are asserted. The example in (23) seems to be the latter case. Taking these facts into consideration, we conclude that Emonds' idea of root transformation must face very subtle problems which cannot be solved within the jurisdiction of syntax. Something like a feature <±assert>, which may be well defined in semantics rather than in syntax, is needed, and, further, some factors concerned with speaker's feeling, which are somewhere beyond semantics, must be taken up when the rule is applied in an embedded S.

From these observations it may be concluded that rigorous restrictions should be imposed on the directional adverb preposing which entails Subject-Verb inversion and that it may be better to distinguish it from that which does not entail the inversion, because the restrictions on the rule may be ascribed to the inversion rather than the preposing. Seemingly the insistence that the directional adverb preposing rule is a root one does not give us any insight into the restriction of adverbial movement.

Next example contains the sentences in which the directional adverbial PP is preposed without Subject-Verb inversion. See (24):

(24)(a) *Out of the tail of my eye* I saw Judith disappear round the corner of the house. (AG107)

(b) *From inside Allterton's room* I heard voices. (AG105)

(c) *Not far from the cabin*, I came upon a stump on the broad top of which I saw many marks of an axe. (RD124)

(d) *From San Salvador*, Columbus sailed south, discovering other islands, including Cuba. (RD64)

(e) *Across the top of a low hill* about 20 cows appeared, with a cowboy on either side and a third rider behind them. (RD81)

Since this kind of directional adverb preposing rule which does not entail any inversion does not impose any severe restrictions that have been found in the corresponding rule with the inversion, it can be accounted for as one of the ordinary movement rules. This type of structure may be represented by (25), in which the adverb, though the adverbial particle is excluded, is dislocated into the COMP:

(25) $[_{S'}\ [_{COMP}\ \ ]\ [_{S}\ X\ Adv<+directional>Y]]$

If the COMP has been filled by something in the cyclic level, no dislocation occurs. If there are

more candidates than one to be preposed in the postcyclic level, one of them will be dislocated into the COMP and the other into the pre-COMP position as in (26):

(26) *In the south, toward home,* it was beginning to rain. (RD10)

Movement of directional adverbials can be seen under VP nodes as well. Observe the following sentences:

(27)(a) The clock struck and Franklin glanced *at it* hurriedly. (AG26)

(b) Mrs Luttrell twittered *to him* delightedly, whilst he flattered her lazily and with a hardly concealed impertinence. (AG29)

(28)(a) He looked obstinately *at Mathis*. (FL125)

(b) Sir William looked doubtfully *towards Nurse Craven*. (AG37)

In (27) the directional PP is followed by a manner adverbial and, in (28) the reverse order is seen. From their cooccurrence restriction and *do so* test, we can present (29) as a structure before the movement rule is applied, so far as these two adverbials are concerned. Both of them can be designated as in (30):

(29) $[_{VP}[_{VP}$ V Adv<+directional>]Adv<+man>]

(30) VP-adv: Adverbs designated as VP-adv can exchange their positions freely so far as they keep an immediate dominance of a VP node.

In conclusion, the movement of directional adverbs within a VP node is predictable by the designation of VP-adv, and all of the other movements can be explained by dislocation based on the structure (25).

3.2. Factive Adverbs

Factive adverbs, so called by Emonds, occur in the sentence-initial position, separated from the following constituents by a comma, optional and obligatory, in written from and by a breath pause in speech. No inversion between Subject and Aux and Subject and Verb can be seen. These adverbs usually carry a *-ly* suffix. According to Emonds, movement of them is an example of the root transformations. First we list the example given by him and then examine them closely. Adverbs on the left can appear in the blanks of the following sentences.

(31)(a) EVIDENTLY: . . . , John . . . sneaked away in time, ...

(b) POSSIBLY: . . . , John . . . could . . . have ?? been replaced, ...

(c) ACTUALLY: . . . , we . . . haven't . . . been ?? trying too hard, ...

(d) TRULY: . . . , there . . . was . . . no reason for the disturbance, ...

(e) SUPPOSEDLY: . . . , John . . . won't cooperate, ...

(f) WISELY: . . . , John . . . didn't answer the question, ...

(g) STRANGELY: . . . , the birds . . . have . . . been ?? surviving the pollution, . . .

(h) FORTUNATELY: . . . , they . . . may . . . have . . . been taking the right pills, . . .

(i) PROBABLY: . . . , John . . . could . . . have ?? been there by six.

(j) ODDLY: . . . , John . . . has ?? been . . . answering questions . . . for an hour.

(k) EVIDENTLY: . . . , John . . . has . . . been ?? answering questions for an hour.

(Emonds 76: 152 & 155)

These examples will be represented as below.

(32) . . . $[_{S}$ NP . . . (Aux) . . . VP X$]$ . . .

Adverbs which fit this structure are *evidently* (31a) and (31k), *strangely* (31g), *possibly* (31b), *probably* (31i) and *actually* (31c).

(33) . . . $[_{S}$ there . . . be—verb . . . NP X$]$ . . .

This structure corresponds to (31d), in which *truly* occurs. If this kind of adverb movement is a root transformation, the *there-be* construction will not be $[_{S}\ [_{NP}$ there$]\,[_{VP}$ be NP$]]$ but $[_{S}\ [_{NP}$ there$]\,[_{VP}$ be$]$NP$]$, which seems to be a correct analysis.

(34) . . . $[_{S}$ NP . . . Aux+n't X$]$ . . .

Adverbs *wisely* (31f) and *supposedly* (31e), which lie out of the scope of negation, can enter this structure.

(35) . . . $[_{S}$ NP . . . Aux . . . $[_{VP}$ have . . . been X$]]$ . . .

The adverb *fortunately* (31h) shows an exceptional distribution as clear in (35) by occurring within a VP as well. But, in this case, we must pay attention to the fact that its exceptional occurrence is very much limited and occurrences in the other positions are much more natural.

(36) . . . [$_{S}$ NP . . . Aux [$_{VP}$ been . . . VP . . . PP]] . . .

In this case, the adverb *oddly* (31j) appears in almost all positions between the constituents except in the post-Aux position. But a careful examination will reveal that there are two kinds of *oddly* confused here: one is that of an S-adverb, more exactly speaking, a Subject-oriented S-adverb, and the other is that of a manner adverb which typically occurs within a VP.

These analyses will make it clear that Emonds' arguments have some problems. (i) His "factive adverbs" contain more than one type of adverbs and further classification will be needed. (ii) He focuses his attention exclusively on the movement of adverbs into a sentence-initial position and no concrete explanation can be found for the movement into any other position. (iii) In his framework, COMP is only once introduced in an S, which can automatically account for the fact that factive adverbs and *wh*-words are mutually exclusive in the position under the COMP as in (37), but we have data as in (38), which need more than one COMP.

(37)(a)**Probably, who* signed the contract?
(b)**Evidently, who* signed the contract?

(38)(a) And *incredibly, even the next morning,* you still thought it was Judith. (AG 177)
(b) *Naturally anything you saw or heard or read* . . . by accident . . . you'd keep to yourself, unless . . . . (AG 144)

In order to explain the data above we assume that we have (39) as an underlying structure:

(39) [$_{S'}$ [$_{COMP}$][$_{S}$ X Adv<+factive>Y]]

When the COMP is empty the adverb can be dislocated there and when it has been filled before the post-cyclic level, no dislocation occurs as clear from (37). If there are more candidates than one to be preposed at the post-cyclic level, one of them will be dislocated into the COMP and

the other into the pre-COMP position, as in (38). Right-and center-dislocation can be seen in (40) and (41). Dislocated constituents are usually separated from the rest of the structure by commas.

(40)(a) One could see through it, *fortunately*, as there is a bolt and not a key on the inside. (AG178)

(b) I'll go up and see him, *certainly*. (AG147)

(c) He'd take every precaution, *surely*. (AG93)

(41) I reflected that Poirot, *probably*, would have some sleeping stuff of some kind. (AG44)

In contrast with the abovementioned adverb we will briefly refer to the performative adverb② such as *frankly*, *honestly*, etc. This kind of adverbs have no cooccurrence restrictions with any constituents in the following S but rather they have something to do with the speaker. We assume that we have (42), which can explain why the sentence in (43) is acceptable.

(42) $[_{S'}$ Adv$<$+performative$>[_{COMP}\{\begin{matrix}Q\\ \phi\end{matrix}\}][_{S}]]$

(43) *Frankly*, what do you think of the position? (NIG73)

Movement of the factive adverbs in other positions than the dislocated ones is explainable in terms of the designation of (44) and a representation in (45):

(44) S-adv

(45) $[\underset{S'}{\ }[\underset{COMP}{\ }][\underset{S}{\ }\ NP\ Aux\ Pred]]$

They suggest that the adverb can occur between the constituents immediately dominated by the S and that it cannot appear within a node such as Pred.

According to Emonds' definition, the factive adverb movement rule is a root one, which is supported partly by the empirical evidence in (46):

(46)(a)*I wonder whether *obviously* John has lost his talent.

(b)*I know that *obviously* John has lost his talent.

It is certain that the factive adverb does not occur in the pre-Subject position of an embedded S, but it can appear between constituents immidiately dominated by an S within an embedded clause as in (47). This latter fact is contradictory to Emonds' definition of the root transformation.

(47)(a) I know that John *obviously* has lost his talent.

(b) I know that John has *obviously* lost his talent.

In my framework the ungrammaticality of (46) is predictable from the fact that the node COMP has been filled with *whether* and *that* before the factive adverb is preposed. On the other hand, the grammaticality of (47) can be explained by the designation of S-adv, which suggests that this type of adverbs can occur freely between constituents immediately dominated by an S.

In conclusion, the movement of factive adverbs within an S is predictable by the designation of S-adv, and all of the other movements can be explained by dislocation based on the structure (39).

3.3. Locative PP Substitution

This rule is one of the root transformations in Emonds' framework. Observe the sentences below:

(48)(a) *Near the fortress* are the Incas' terraced fields which were cultivated by the slash-and-burn method of agriculture. (MW800101)

(b) *Away in the depths of the great, gloomy African forests* lives the mighty gorilla . . . - the giant of the monkey tribe. (EACD68006)

(c) *On my left* stood a low tree with a road runner sitting in the top. (RD6)

(d) *Beside him* sat the squat man who had carried the stick in the Casino. (FL93)

(e) *On the desk* lay his huge pile of chips. (FL82)

(f) *Above in the sky* hung a mushroom of black smoke which rose and dissolved as he drunkenly watched it. (FL34)

Some characteristics of these sentences are summarized as below: (i) The PP is a locative phrase which has cooccurrence restriction with a verb or a VP, rather than the whole S, and is moved to a marked sentence-initial position. (ii) The subject NP is placed in a marked sentence-final position by an inversion rule. (iii) The verbs in these sentences are such intransitive verbs as *be*-verbs, *live, stand, sit, lie, hang,* and so on, and there are no following constituents except the PP to be preposed. (iv) No restriction can be found with respect to TNS. Furthermore, aspectual modification is available as shown in (49):

(49)(a) Among the guest was standing John. (Emonds 76: 41)

(b) In each hallway has long been a large poster of Lenin. (Emonds 76: 37)

From the observation of these occurrences we must point out that as many restrictions are imposed on this rule as on Emonds' directional adverb preposing rule, though the degree is comparatively less.

Emonds' argument that this rule is one of the root transformations may be partly supported by the data in (50):

(50)(a)*The posters that in each hallway are subtly influence the children.

(b)*I have no idea how often among the guests were John and his family. (Emonds 76: 37)

On the other hand, Bowers asserts that this rule cannot be a root transformation, based on (51):

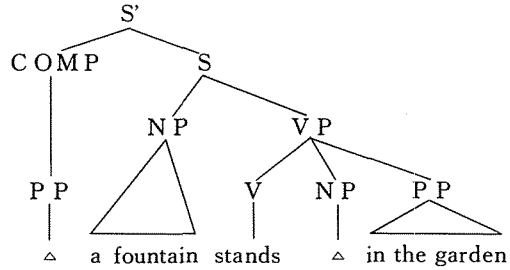
(51)(a) Are you aware that John believes that over that fence is the outside world?

(b) It surprised everyone to learn that in the garden stood a fountain. (Bowers 76: 225)

These data do not seem to be so powerful because the occurrence of this pattern is very much limited and the judgment of their acceptablity is subtle. Furthermore, if we follow his line of argument, the sentence in (52) must be represented by (53) before the locative PP substitution and Subject-Verb inversion are applied:

(52) In the garden stands a fountain.

(53)



(Bowers 76:230)

However, this interpretation has some difficulties: (i) The COMP is allowed to appear only once in a simple S and sentences as in (51) cannot be accounted for. (ii) The NP node under VP is *ad hoc*, that is, not independently motivated. Even if it is motivated, it forces us to assert that the NP in the subject position should be inserted into an NP node in the object position. This provides us with an unreasonable analysis. In sum, his idea that this rule is a structure-preserving rule does not seem to be convincing.

In my analysis, the latter difficulty will be avoided with a revised underlying structure and

derivations as in (54):

(54)(a) $[_{S'}\ [_{COMP}\ ]\ [_{S}\ NP\ [_{vp}\ Vx\ PP<+loc>]]]$

(b) $[_{S'}\ [_{COMP}\ PP<+loc>]\ [_{S}\ NP\ [_{vp}\ Vx]]]$

(c) $[_{S'}\ [_{COMP}\ PP<+loc>]\ [_{S}\ [_{vp}\ Vx]NP]]$

As for the former difficulty, observe (55) as well as (51):

(55)(a) *The guide was surprised that beyond the next hill stood a large fortress. (Hooper-Thompson 73:)

(b)*The rotunda in which stands a statue of Washington will be repainted.

(c) The rotunda, in which stands a statue of Washington will be repainted.

(d)*The fact that in the Italian garden stands an elegant fountain should surprise nobody.

(e) The fact is that in the Italian garden stands an elegant fountain. (Langendoen 79: 431)

A careful examination shows that this rule can be applied in an embedded S when the S is asserted, not presupposed, by the speaker. Acceptability of these sequences depends on semantic factors as well as syntactic ones. Emonds' idea of the root transformation collapses here because it has been defined syntactically. But, in my opinion, these difficulties are caused by an inversion rather than a preposing rule, and it is, therefore important to distinguish the preposing rules which entail Subject-Verb inversion from those which do not, and examine them separately. My focus is on the latter type of preposing rule. The former will be discussed under the title of "inversion" in future.

Now we turn to the locative PP preposing which does not entail Subject-Verb inversion. See (56) and (57):

(56)(a) *In the background* there was the noise of small waves on a beach. (FL118)

(b) *Behind me* I heard my mother say, "Oh, Jess!" (RD10)

(c) *At a fork in the trail* he stopped, trying to decide which way I'd take. (RD7)

(d) *Near the house* I ran into Boyd Carrigton. (AG149)

(e) *Outside*, the weather had broken. Since ten o'clock the rain had been pouring down. (AG118)

(f) *Here* I sat down, lit my pipe, and settled to think things out. (AG64–65)

(57)(a) *In Hispaniola, in 1500,* a judge who was sent out from Spain found Columbus had

committed several crimes, . . . (RD65)

(b) *In the cornfield that day* I'd simply felt a powerful urge to go to that mountain . . . and I went. (RD12)

(c) *On January 24, 1838, in his studio at the university*, Morse showed a group of visitors how to use the Morse code. (RD27)

(d) *The year before, in these waters*, he had seen plenty of sharks. (RD35)

In (56), one locative adverbial occurs in the sentence-initial position and so do more adverbials than one, one of which is a locative, in (57).

In order to explain the data above we assume that we have (58) as an underlying structure:

(58) $[_{S'}\ [_{COMP}\ \ ]\ [_{S}\ X\ Adv<+loc>Y]]$

When the adverb is dislocated into the COMP, the sentence belonging to (56) will be derived. When there are more constituents than one to be preposed at the postcyclic level, one of them enters the COMP and the other occupies the pre-COMP position. The latter case can be illustrated by (57). Next, see (59):

(59)(a) *Under the desk, what* did you find?

(b) *Yesterday, what* did you find under the desk?

The data in (59) show that dislocation and the formation of an interrogative sentence are not mutually exclusive so far as locative and time adverbials are concerned. In order to explain this fact we must replace (58) with (60):

(60) $[_{S'}\ [_{COMP}\ \left\{\begin{matrix}Q\\ \phi\end{matrix}\right\}]\ [_{S}\ X\left\{\begin{matrix}Adv<+time>\\ Adv<+loc>\end{matrix}\right\}Y]]$

Locative PP's can be seen in the sentence-initial position of an embedded S as well. Observe (61):

(61)(a) It was at ten minutes past one by Bond's watch that, *at the high table*, the whole pattern of play suddenly altered. (FL69)

(b) We suspect that *in American minds today, as on the map*, Afghanistan lies midway between Munich and Vietnam. (NYT800203)

These sentences show that Emonds' idea of the root transformation collapses here again and gives us nothing insightful. In my framework we assume that we have (62) as an underlying structure of the embedded clause, in which the adv <+loc> can be dislocated into the initial position of the S in which the adverb is located. Possibly two adverbials, one of which is a locative, occur in the position too. One example is given in (63):

(62) $[_{S'}\ [_{COMP} \pm wh][_{S}\ X\ Adv<+loc>Y]]$

(63) Bond had always disliked pyjamas and had slept naked until *in Hong Kong at the end of the war* he came across the perfect compromise. (FL146)

Now we turn our attention to the locative adverbial movement which cannot be regarded as dislocation. In this case, the adverbials may be specified in more than one place in the PS rules, depending on their cooccurrence restriction with other constituents in the construction. Observe the sentences in (64):

(64)(a) *In that restaurant*, if John is asked to wear a necktic, he wears a necktie.

(b) She stopped abruptly *in the doorway*. (AG104)

(c) John put the book *on the table*.

In (64a), the adverbial *in that restaurant* does not have any cooccurrence restriction with any other constituents, but, as it were, with the whole S minus the adverbial itself. On the other hand, the adverbial *on the table* in (64c) has such a severe restriction with the verb that the sentence without it becomes ungrammatical. The sentence (64b) lies midway. On these facts we can designate these adverbials in (64a), (64b) and (64c) as S-adv, VP-adv and V-adv respectively. S-adv's can move freely between constituents immediately dominated by an S within the same S, and VP-adv's can do so between constituents immediately dominated by a VP. V-adv's, though this term may be changed, can move with much more severe restrictions than the former two adverbials.

When these adverbs are dislocated, acceptability of the resulted sentences varies depending on where they have been specified in the PS rules. Thus, dislocation of an S-adv is very likely to generate a more acceptable sentence than that of a VP-adv. Accordingly, when a V-adv is dislocated the sentence will be the least acceptable.

In conclusion, movement of locative adverbials is predictable by the designations given to

them such as S-adv, VP-adv, V-adv, etc. Dislocation in an independent S can be explained in terms of (60) and one in an embedded S in terms of (62).

3.4. Manner Adverbs

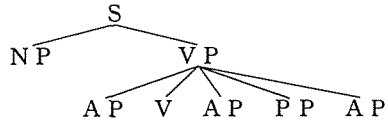
In Emonds' framework the movement rule of manner adverbs is regarded as one of the structure-preserving rules. The positions where they are moved are marked with AP's which are, by definition, supposed to be specified in the PS rules. The sentences in (65) are represented by (66):

(65)(a) They called through the halls *loudly*.

(b) They *loudly* called through the halls.

(c) They called *loudly* through the halls.

(66)



Movement of the adverb of manner in (65) can be explained by (66) but it is suggested at the same time that this kind of analysis brings about a very complicated and redundant description of adverbs. Most adverbs and adverbials in English are optional constituents. It might, therefore, be possible for indefinitely many adverbs and adverbials to occur and, in that case, indefinitely many AP's are needed, and furthermore, all of them must be specified by the PS rules.

Next, observe the sentences in (67) and their underlying structure shown in (68)

(67)(a) The prisoner protests his innocence *loudly* often.

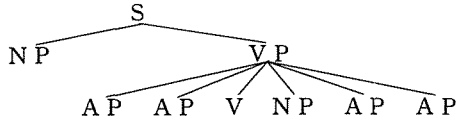
(b) The prisoner *loudly* protests his innocence often.

(c) The prisoner often protests his innocence *loudly*.

(d) The prisoner often *loudly* protests his innocence.

(e)*The prisoner *loudly* often protests his innocence. (Anderson 67: 185)

(68)

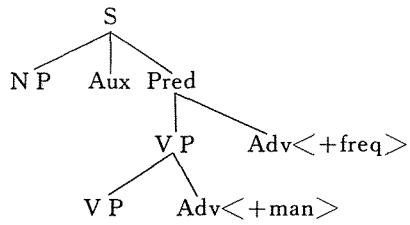


The tree (68) can account for the grammaticality of the sentences (67a)–(67d), but cannot

identify (67e) as an ungrammatical sequence. This fact suggests that we should have information which AP corresponds to which adverb. Put it differently, more than one type of AP's must be distinguished, which will still further complicate the PS rules.

In my framework, (68) is replaced by (69):

(69)



Manner adverbs are designated as VP-adv while frequency ones as Pred-adv. Ungrammaticality of (67e) is predictable from the fact that the manner adverb, a VP-adv, which is located below the frequency adverb, a Pred-adv, in the hierarchy, has taken a higher, or more exterior position than the frequency one.

Next, observe the sentences in which manner adverbs are dislocated as in (70) and (71):

(70)(a) *Gently* my friend patted my arm. (AG16)

(b) *Hastily* I swung round the bookcase and pretended to be looking for a book. (AG124)

(c) *Slowly* Poirot shook his head. (AG159)

(d) *Suddenly* Boyd Carrigton wheeled back into the room. (AG124)

(71) "Shtop," had said the voice, *quietly*. (FL113)

The manner abverb is dislocated leftwards in (70) and rightwards in (71). In either case the moved adverb is under an S and, if we follow Emonds' idea, we must call this a root transformation though he has mentioned nothing about this.

In my framework, the sentences in (70) and (71) are represented by (72) and (73), both of which share (74) as an underlying structure.

(72) $[_{S'}\ [_{COMP}\quad \text{Adv}<+\text{man}>][_{S}\ \text{X Y}]]$

(73) $[_{S'}\ [_{COMP}\quad][_{S}\ \text{X Y}]\text{Adv}<+\text{man}>]$

(74) $[_{S'}\ [_{COMP}\quad][_{S}\ \text{X Adv}<+\text{man}>\ \text{Y}]]$

When the node COMP is filled by a Q-morpheme at the level of (74), no dislocation occurs. However, when there are two adverbials, one of which or both of which are manner adverbs and they are to be preposed into the sentence-initial position, one of them is dislocated into the

COMP and the other into the pre-COMP position as shown in (75):

(75) [Adv [Adv][X Y]]
S' COMP S

This is illustrated by (76):

(76)(a) *Carefully, with the flame before him,* he burned the thorns off the cactus fruit. (RD91)

(b) *Suddenly, as one of the Mexicans rode near him,* the bull lifted his horns and came racing toward the gate where I was standing. (RD96)

(c) *Patiently, as if explaining something to a child,* he continued. (RD109)

Finally, observe (77), in which a manner adverb is dislocated leftwards in an embedded S. Ungrammaticality of (77b) is ascribed to the fact that the COMP has been filled with *that* before the adverb is dislocated.

(77)(a) I insisted that my friend patted my arm *gently*.

(b)*I insisted that *gently* my friend patted my arm.

In conclusion, the movement of manner adverbs within a VP can be explained by the designation of VP-adv, and all other movements can be predicted by dislocation based on the sturcture (74).

4. Conclusion

As for Emonds' hypothesis we have pointed out several difficulties in each section and concluded that it would not be so useful for describing the movement of English adverbials.

In this article it has been argued that the movement which entails Subject-Verb inversion and that which does not must be distinguished and analyzed separately. I have tried to describe some English adverbial movement rules belonging to the latter type.

My conclusion is that the movement may be described in terms of *dislocation* and *desginations of transportability* if refined PS rules and rigorous hierarchical representations are properly given.

In the case of dislocation the structural representation below is required:

(78) [[ ][X Adv Y]]
S' COMP S

On left-dislocation the adverb will be moved into the COMP and, if it has been filled with the other constituent at the post-cyclic level, into the pre-COMP position. On right-dislocation it will be moved into the place after the S boundary. Center-dislocation will bring it into the S, in which it is usually separated from the rest of the structure by commas.

When the COMP has been filled by Q-morpheme or whatever may be a trigger of the formation of a question sentence, the adverbial can be moved into the pre-COMP position only if it is a time adverbial or a locative one. Otherwise no dislocation occurs.

When the S is an embedded one, no leftward dislocation over the S boundary occurs. But dislocation into the S-initial position within an S is possible when the adverbial[③] is a time or locative one.

Movement of the adverbials which does not violate the cooccurrence restriction in the PS level will be predictable by the designations to be given to them. Here is a list of designations which have been more or less mentioned in this paper:

(79)

Designations	*Types of Adverbials*
S'-adv:	Adv <+performative>, etc.
S-adv:	Adv <+locative>, Adv <+time>, etc.
Pred-adv:	Adv <+freq>, etc.
VP-adv:	Adv <+manner>, Adv <+directional>, Adv <+locative>, etc.

Generally speaking, the designation of X-adv means that it can move freely between the constituents immediately dominated by an X.

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Sources of Data:

AG: Christie, Agatha: *Curtain* Fontana.

EACD: Kimura, T. & K. Yamasawa: *English Aural Comprehension Drill* Kaitakusha.

FL: Fleming, Ian: *Casino Royale* Bantam.

NIG: Christie, Agatha: *Ten Little Niggers* Fontana.

MW: *Mainichi Weekly.*

NYT: *The New York Times.*

RD: *Reader's Digest Readings Book Six.*

SS: *Sesame Street.*

NOTES

1. As for the reference symbol after an example, see *Sources of Data* in BIBLIOGRAPHY.
2. This type of adverbs can be designated as S'-adverb.
3. The adverbial may include many other adverbials besides time and locative ones but it does not include Adv <+factive> and Adv <+man>.